

ENVIRONMENTAL RESOURCES CHAPTER



INTRODUCTION

Scottsdale is a community that embraces conservation and preservation of the environment. The city's distinctive natural resources and environment contribute to the quality of life and the community's economic vitality. The protection and conservation of these unique and valuable resources is everyone's responsibility. Environmental stewardship means that Scottsdale has a responsibility to manage local resources to assure a healthy environment. Individual citizens, businesses, and the government working together can achieve this. There are many ways the City of Scottsdale can protect and improve the environment. For example, the city can lead by example in the operation of its facilities and delivering services in an environmentally sustainable manner.

Much of Scottsdale's reputation is built upon the creative environmental solutions found to overcome challenges in the past. The need for a stormwater drainage channel became the world-renowned Indian Bend Wash. The need to preserve the natural beauty of the McDowell Mountain tops, hillsides, and natural areas resulted in the Environmentally Sensitive Lands and Native Plant Ordinances and in the purchase of Preserve lands to protect against development of these sensitive environments. The city's innovative Green Building Program continues the tradition of sustainable desert living.

This chapter translates the vision of the community into a set of concrete goals to achieve an environmentally sustainable community. When environmental goals compete with other goals, such as those related to economic development, the city is committed to giving equal consideration to the environmental goals to protect the functions that natural systems can perform and to prevent harmful effects on human health. The goals and policies in this chapter promote the utilization of technologies and strategies to conserve energy and water, reduce emissions and waste, improve air quality, and protect the natural environment.

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ENVIRONMENTAL PLANNING ELEMENT



Scottsdale, situated in the Sonoran Desert, has a unique environment that is a valuable asset to the community. The character of Scottsdale is defined in large part by the surrounding Sonoran Desert and mountains. Scottsdale's natural environment not only includes the natural systems that sustain vegetation and wildlife, but also includes resources that provide clean air and water, capture carbon emissions, protect the community from hazards, and provide places where people can recreate and enjoy natural beauty.

Healthy natural systems are vital community assets that, without careful planning, face challenges from population growth, climate change, and the cumulative effects of urban life. The health of Scottsdale's environment is a key indicator of the quality of life of the city. The Environmental Planning Element provides policies on important issues including, but not limited to, water conservation, pollution prevention, waste management, and air quality.

Goals and Policies

GOAL EP 1.

Preserve and protect the natural environment to enhance the quality of life in Scottsdale.

POLICIES

- EP 1.1.** Retain Scottsdale's aesthetic values and heritage of the Sonoran Desert.
- EP 1.2.** Preserve significant features of Scottsdale's natural environment including, but not limited to, boulders, major washes, and high priority natural area open space.
- EP 1.3.** Identify and protect significant historical and archaeological resources.
- EP 1.4.** Integrate environmental quality protection into all phases of local planning, policy, and development.
- EP 1.5** Promote Scottsdale as a sustainable community and an ecotourism destination.

GOAL EP 2.

Conserve water and encourage the use of non-potable water use strategies.

POLICIES

- EP 2.1.** Continue the development of the effluent reuse system and management policies to guide efficient use of reclaimed water.

- EP 2.2.** Review future development impacts on water use and encourage development design that fosters water conservation including, but not limited to, water harvesting.
- EP 2.3.** Minimize the amount of water loss by effectively monitoring and maintaining the water distribution system.
- EP 2.4.** Maximize groundwater recharge and efficiently use treated effluent for landscape irrigation in response to seasonal water demands.
- EP 2.5.** Support local industries in maximizing recycled water usage at their facilities.
- EP 2.6.** Strive for efficient water use through educational programs and incentives.
- EP 2.7.** Protect water resources by sensitively developing near environmental resources.
- EP 2.8.** Minimize the amount of turf and make optimal use of drought tolerant native vegetation to reduce water consumption and retain the Sonoran Desert character.

GOAL EP 3.

Promote local and regional efforts to improve air quality.

POLICIES

- EP 3.1.** Reduce automobile emissions through traffic management, mobility system improvements, and promotion of alternative modes of transportation.
- EP 3.2.** Reduce emissions from city fleet vehicles.
- EP 3.3.** Actively participate in discussions and decisions regarding coordination and funding of regional air quality improvements.
- EP 3.4.** Further reduce activities which contribute to air pollution during air stagnation episodes.
- EP 3.5.** Comply with regional air quality standards.
- EP 3.6** Minimize non-indigenous vegetation that produces pollen.
- EP 3.7** Reduce dust and particulate air pollution created by man made sources such as construction, maintenance (including landscaping) and vehicles.

GOAL EP 4.

Promote resource recovery, reuse, and recycling; and encourage the use of recycled, recyclable, and renewable materials.

POLICIES

- EP 4.1.** Maintain and expand citywide recycling programs.
- EP 4.2.** Support commercial and industrial sectors in minimizing waste generation and establishing recycling programs.

- EP 4.3.** Support regional efforts to establish policies and regulations to minimize waste generation through effective waste reduction, reuse, and recycling.
- EP 4.4.** Reduce construction waste through recycling of packaging and building materials and through environmentally preferable purchasing.
- EP 4.5** Maximize opportunities to utilize paperless media instead of hard copy materials.

GOAL EP 5.

Identify and reduce heat islands.

POLICIES

- EP 5.1.** Identify areas where livability and pedestrian use are impacted by the heat island effect and create strategies to mitigate such effects.
- EP 5.2.** Incorporate development strategies that reduce the heat island effect including, but not limited to, vegetation, cool roofs, shade, paving materials, reduction of pavement, and other best practices.

GOAL EP 6.

Strive to provide access to healthy, local food resources.

POLICIES

- EP 6.1.** Incorporate food sources including, but not limited to, gardens and neighborhood markets, into neighborhoods.
- EP 6.2.** Identify opportunities and locations throughout the community for community gardens, farmers markets, and other local food sources.

GOAL EP 7.

Research, promote, and incorporate innovative policies and practices that support the city's leadership in environmental stewardship.

POLICIES

- EP 7.1.** Provide the community with environmental education and involvement in stewardship opportunities.
- EP 7.2.** Develop programs to attract environmentally sustainable industry to Scottsdale.
- EP 7.3.** Support the purchase of products and services from locally owned businesses and the manufacture of local sustainable products.

GOAL EP 8.

Minimize impacts of light and noise pollution.

POLICIES

- EP 8.1.** Support Scottsdale's designation as an Outdoor Light Control City by reducing light pollution, glare, and light trespass where feasible, while still addressing public safety needs.
- EP 8.2.** Implement noise abatement techniques through design, compatible land use, and other sound reduction methods.
- EP 8.3.** Integrate noise considerations into the planning process of future developments.

GOAL EP 9.

Promote sustainable development.

POLICIES

- EP 9.1.** Utilize green building principles and programs to create a healthy and sustainable building stock.
- EP 9.2.** Create durable construction for the desert environment to provide options for adaptive reuse.
- EP 9.3.** Promote creative passive solar site and building design strategies that recognize and respond to the Sonoran Desert climate.
- EP 9.4.** Preserve, salvage, and/or restore native plants, wildlife habitat, and natural resources to maintain the biodiversity and long-term sustainability of the area's desert ecology.
- EP 9.5.** Encourage the use of native, drought tolerant plants and discourage non-indigenous vegetation.
- EP 9.6.** Retain native and mature trees.
- EP 9.7.** Support infrastructure which uses low-impact environmental solutions to provide traditional infrastructure services.
- EP 9.8.** Protect and enhance the natural elements of all development sites.
- EP 9.9.** Consider sustainable stormwater management measures in all development, including but not limited to vegetated roofs, pervious pavements, rainwater harvesting, and low-impact development.
- EP 9.9** Discourage the use of invasive plants and support the removal of existing invasive species.

CONSERVATION ELEMENT

Conservation is the controlled use and systematic protection of natural and man-made resources. The City of Scottsdale is active in conserving natural and man-made resources. From conserving open space and wildlife habitat to the protection of watersheds, Scottsdale is continuously improving its efforts to monitor and safeguard its natural resources.



Continued local and regional growth will place development pressures on lands at the urban fringe. Growth can have unintended consequences on the natural environment including the degradation of water, the loss of habitats, and diminished scenic views. The challenge remains at achieving a balance between orderly growth and the protection of Scottsdale's natural resources. Wildlife, waters, and other resources are regional elements which pay no attention to boundaries. Coordination between agencies is essential in order to achieve sustainability.

The Conservation Element promotes the efficient use of natural resources and works towards the long-term sustainability of non-renewable resources. The goals and policies in this element will help work towards a healthy and diverse environment that future generations will be able to use and enjoy.

Goals and Policies

GOAL CNSV 1.

Protect groundwater and surface water resources from potential pollution through a variety of measures relating to land use, transportation, and hazardous substances.

POLICIES

CNSV 1.1. Monitor the storage, manufacture, use, transportation, and disposal of hazardous substances, especially in groundwater sensitive water supply areas.

CNSV 1.2. Protect watersheds through the management of washes and floodplains to maintain their multiple biological, physical, and social values.

CNSV 1.3. Continue efforts to remediate groundwater contamination and implement preventative measures to avoid future contamination of groundwater resources.

GOAL CNSV 2.

Minimize erosion through the retention and use of vegetation, building code regulations, erosion control measures, and other means.

POLICIES

CNSV 2.1. Discourage clearing and grading of entire sites located in Environmentally Sensitive Lands.

CNSV 2.2. Promote wise use of indigenous vegetation as the primary means of erosion control.

CNSV 2.3. Restore natural areas to their previous conditions which were damaged by erosion and/or construction.

GOAL CNSV 3.

Prevent and control the pollution of watercourses.

POLICIES

CNSV 3.1. Improve stormwater quality through the implementation of best management practices within watersheds.

CNSV 3.2. Educate the community on stormwater pollution prevention.

CNSV 3.3. Investigate and implement techniques which minimize use of chemicals in maintaining turf and landscape materials.

CNSV 3.4. Maintain compliance with Scottsdale's NPDES (National Pollution Discharge Elimination System) permit by implementing structural and non-structural control measures.

CNSV 3.5. Protect watercourses, where appropriate, from sediment and pollution through the use of vegetation, erosion control measures during construction, settling ponds, and other structural and non-structural means.

CNSV 3.6. Recognize the benefits of using green infrastructure to naturally manage stormwater, reduce flooding risk and improve air and water quality.

GOAL CNSV 4.

Conserve the major watercourses and water bodies which have significant functions and values.

POLICIES

CNSV 4.1. Maintain significant natural washes in Environmentally Sensitive Lands in their natural state to the maximum extent possible.

CNSV 4.2. Incorporate and maintain transition areas between natural resources and development.

CNSV 4.3. For flood control projects, a high priority in the design criteria should be placed on:

CNSV 4.3.A. Impact on the entire ecosystem including plants and animal habitat.

CNSV 4.3.B. Sensitive aesthetic treatment.

CNSV 4.3.C. Designs that are compatible with the character of the adjacent neighborhood.

GOAL CNSV 5.

Protect the variety and quantity of wildlife habitat throughout the community.

POLICIES

CNSV 5.1. Incorporate wildlife habitat elements into park plans and landscaping.

CNSV 5.2. Incorporate the use of natural watercourses, where appropriate, as wildlife corridors which allow the passage of wildlife between natural areas throughout the city.

CNSV 5.3. Coordinate with governmental agencies to identify and protect rare and endangered species and their habitat.

CNSV 5.4. Restore habitat in degraded areas (burned, vehicular damage, and invasive vegetation) of Scottsdale's McDowell Sonoran Preserve back to their natural condition.

CNSV 5.5. Incorporate and maintain transition buffers between Scottsdale's McDowell Sonoran Preserve and developed areas.

ENERGY ELEMENT

The Energy Element is a new state mandated element for the 2011 General Plan. The inclusion of this element presents an opportunity to set energy goals to further Scottsdale's long-term commitment in protecting the environment. A safe, reliable energy supply is important to the city's overall health and commerce. Utilizing renewable energy systems allows Scottsdale to become more independent from the grid and imported fossil fuels. Moving to more reliable and affordable sources will showcase the city's commitment to a sustainable energy future.



The city's total demand for energy will continue to increase with projected population growth. The energy goals and policies provided address climate change as well as work towards balancing the needs of consumers with the sustainability of the community's energy sources. The following goals and policies encourage renewable energy production and efficient energy use.

Goals and Policies

GOAL E 1.

Maximize the efficient use of energy through sustainable site and building practices.

POLICIES

- E 1.1.** Encourage the inclusion of sustainable building practices in new development and redevelopment projects.
- E 1.2.** Maintain and enhance Scottsdale's Green Building program as a way to promote sustainable energy use practices.
- E 1.3.** Orient buildings and lots to maximize solar access and natural ventilation and to minimize conflicts with the solar access of adjacent structures or properties to provide for greater use of renewable energy sources.
- E 1.4.** Promote the development of shared energy facilities in major development projects.
- E 1.5.** Utilize natural properties and building systems including, but not limited to, sun, shade, thick walls, insulation, to maximize building cooling and heating.
- E 1.6.** Reduce energy consumption per capita by using passive and active design and technology to capitalize on the renewable energy resources available in the desert southwest.

- E 1.7.** Promote the use of energy efficient strategies in buildings including, but not limited to, energy efficient lighting, additional insulation, window glazing, and weather stripping, prior to incorporating renewable energy sources.

GOAL E 2.

Increase public awareness of energy efficiency.

POLICIES

- E 2.1.** Develop public and public-private energy conservation education for the community.
- E 2.2.** Provide education on the continued maintenance and operations of energy-efficient equipment.

GOAL E 3.

Increase the energy efficiency of city operations.

POLICIES

- E 3.1.** Expand and accelerate Scottsdale's use of clean and alternative fuels in its fleet to achieve and exceed regional clean air goals.
- E 3.2.** Minimize energy consumption in the provision of municipal services without affecting the quality and quantity of services.
- E 3.3.** Use energy conservation measures in the development and maintenance of city infrastructure.
- E 3.4.** Develop strategies to lower utility costs and reinvest savings into energy efficiency measures.
- E 3.5.** Perform energy audits to assess energy use of municipal facilities, projects, and programs.
- E 3.6.** Promote the use and design of energy-efficient street lighting systems and continue to convert street lights to be more energy-efficient.

GOAL E 4.

Increase energy-related research and economic development.

POLICIES

- E 4.1.** Support regional efforts to increase the supply of energy from renewable sources, distributed generation, and cogeneration.
- E 4.2.** Work with the regional energy authority and local utility providers to minimize the likelihood and impact of weather-, disaster-, terrorism-, and market-related power outages.

- E 4.3.** Promote Scottsdale's favorable energy assets including, but not limited to, solar, to potential investors, entrepreneurs, and employers.
- E 4.4.** Consider the use of alternative finance options to achieve renewable energy supply goals.
- E 4.5.** Develop strategies to optimize existing energy infrastructure and encourage the interconnection with smart grid technologies.
- E 4.6.** Work with other agencies and utility companies to develop safe, economical, and renewable energy resources.

GOAL E 5.

Develop alternative energy sources which are compatible with environmental quality.

POLICIES

- E 5.1.** Prepare guidelines for development, management, and conservation of various potential energy sources including, but not limited to, natural gas, solar, geothermal, biomass, and wind resources.
- E 5.2.** Provide incentives to encourage the generation of local renewable energy.
- E 5.3.** Diversify the city's energy supply sources with emphasis on cost-effective, efficient, clean, renewable, reliable, and secure energy sources.

